

Trainer's Guide

Module 6.2.4

Complex communication means



Presenter's name: _____

Date: _____



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1.Introduction

Morphosyntax

Morphosyntax is the study of the interaction between morphology and syntax in a language, focusing on understanding how the structure of words can change based on their inclusion in sentences. In people with IDD, the morphosyntactic aspects of language remain a major difficulty. The developmental delay already demonstrated in IDD children in terms of mastery of the phonological and lexical-semantic aspects of language is also observed at the morphosyntactic level. Although most studies have focused on Down syndrome children, ²¹ it has been found that in most cases of IDD, language is affected by a delay in syntactic expression, by production errors, omissions and difficulties in understanding grammatical morphemes. Mean Length of Utterance (MLU – the length of spoken utterances) is relatively low, even in adulthood; combinatorial language is characterised by a certain formal simplicity of utterances.

From a developmental point of view, the ability to combine several words appears at around 20-24 months in neurotypical children. This marks a considerable increase in the child's expressive power. Combining 2 or 3 words in the same utterance enables a whole series of meanings to be expressed much more clearly and completely (for example, expressing the existence of a referent, its absence or disappearance; specifying the attribute of a referent, its possession or location; expressing a relationship between an agent and an object, etc.) (J.-A. Rondal et al., 1999).

What differentiates these first child utterances from adult utterances is, on the one hand, the use in the latter of grammatical words such as articles, pronouns, prepositions, etc., and of inflectional morphological marking and, on the other hand, of syntactic marking of discourse modalities.

In many languages, including French and English, word order and inflectional morphological marking are essential variables for expressing meaning. Most young children's utterances are



correctly ordered at around 30 months. The canonical order in French is subject-verb-object, and generally represents an agent-action-patient relationship. Inflectional markings (gender, number, etc.) on the various lexical items make it possible to encode additional relationships of meaning or to emphasise certain semantic indications already provided in the sentence.

In general, young children have a better understanding of syntactic aspects than of morphological grammatical aspects (Brown, 1973). Two stages are generally identified in morphosyntactic production: a first stage in which children begin to produce multi-word utterances, and a second stage in which they begin to use the morphological device. It seems that the relational meanings expressed by the syntactic device are more essential than those expressed by the morphological devices, which do not encode independent meanings but modulate the meaning of other terms (for example, verbal inflections provide information about the conjugation tense and/or aspect of the verb, the form of pronouns with which it is granted, etc.). These forms have little phonetic or perceptual salience. As a result, they do not attract the child's interest at an early stage. It is also interesting to note that the earlier acquisition of syntax than grammatical morphology is also observed in morphologically rich languages (such as German and Italian). The complexification of morphosyntax can be summarized as follows (adapted from Ball et al., 2012; Schelstraete, 2011):

Age	Syntactic complexity	Description
12-18 months to 2 years-old	One-element sentence	Noun or verb alone Ready-made formulas Context necessary for understanding
2 yrs to 2;6yrs	Two-element sentence	Increasing phrases complexity <i>"baby bottle"</i> = the baby's bottle Subject-verb succession <i>"me want"</i> (the pronoun may not be suitable for the subject-verb combination) Two-part questions, commands
2;6yrs to 3yrs	Three-element sentence	Subject-verb-object/complement structure Beginning of inflectional morphology: production of the verbal, nominal and adjectival inflections (e.g. marks of gender, plural, tense)
3 yrs to 3;6yrs	Sentences with 4 or more elements	Increasing mastery of inflectional morphology



3;6yrs to 4yrs	Sentences with several clauses	Combination of several propositions to express complex meanings (coordination, subordination, etc.)
4-5yrs	Complex syntax	The essentials of grammar have been acquired Development of the pronominal system, quantifiers and modal verbs Errors may still be made with irregular forms of verbs or plurals, the use of certain determiners, etc.
5 yrs- adolescence	Structuring discourse	Use of connectors, complex structures, control of intonation

Compared with this general picture, children with IDD show a significant discrepancy. Only the first manifestations of two-word combinations occur at the same mental age in IDD and neurotypical children (Miller et al., 1993).

The process of acquiring rules for word order in the sentence is like that observed in the neurotypical child. These order rules therefore appear from the stage of first utterances. Subsequently, we observe that the productions of IDD children, although shorter and less complex than those of children of the same developmental age, are correctly ordered. In adults with IDD, only half of the utterances produced are complete and grammatically correct. Sentence complexity is also reduced. Coordination and subordination are rarely present in productions. Morphological level is objectively the most deficient, whatever the chronological age of the individual (Comblain, 1996). Grammatical marking of gender and number occurs only once in two, and definite and indefinite articles are often omitted, as are feminine markings on nouns and adjectives, and tense and person markings on verbs (Comblain & Piérart, 1998; J.-A. Rondal & Lambert, 1983). In general, the syntactic production of adults with Down's syndrome is qualitatively inferior to that of intellectually disabled adults of other aetiologies. Thus, compared with male individuals of the same mental age with X-Fragile syndrome, the utterances of young adolescents with Down's syndrome are shorter, less diversified and contain fewer rich syntactic forms, fewer interrogative and negative forms (Martin et al., 2013).

As in production, there is a discrepancy between syntactic and morphological comprehension. In concrete terms, syntactic comprehension is generally in line with what is expected based on non-verbal mental age, whereas comprehension of grammatical morphology is below what is expected (Price et al., 2007). The difficulty that people with IDD have in mastering the



morphological devices of language can be explained by the fact that, unlike the syntactic device, these do not encode independent meaning but rather have a function of modulating the meaning of other terms (the time at which the action takes place, the number, the person, etc.). These forms are phonetic-perceptually less salient and attract the child's attention later.

If we analyse the table above, we might wonder whether beyond the simple syntactic constructions of the "subject+verb+complement" type, IDD people can produce and understand more complex sentences. The first research and publications on this topic suggest that IDD children follow the same developmental path as neuro-typical children but achieve less than neuro-typical children (see(J. A. Rondal, 1995) for a review). The conclusion of these studies is that no further progress is made in the mastery of complex syntactic structures beyond early adolescence in people with IDD. However, this assertion was qualified by subsequent research (Rondal et al., 2007; Rondal & Comblain, 1999, 2002b, 2002a) which showed that language acquisition was still possible in adults and adolescents with IDD, mainly through imitation. Similarly, Comblain (1989) used targeted and systematic training to help adults with Down's syndrome understand syntactically complex sentences (reversible passive sentences). However, one must remain cautious in drawing conclusions from this type of research. The increased performance of adolescents and adults with Down's syndrome is not due to a spontaneous and natural evolution but to intensive training in understanding a certain type of sentence. Furthermore, no data is available on the maintenance of performance after training. Finally, it should be remembered that the data in the literature nevertheless argue in favour of the existence of a critical period for the morpho-syntactic aspects of language (Rondal & Comblain, 1999; Comblain 1996).

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<https://doi.org/10.1016/B978-2-294-71450-4.00006-5>



2.Materials Needed

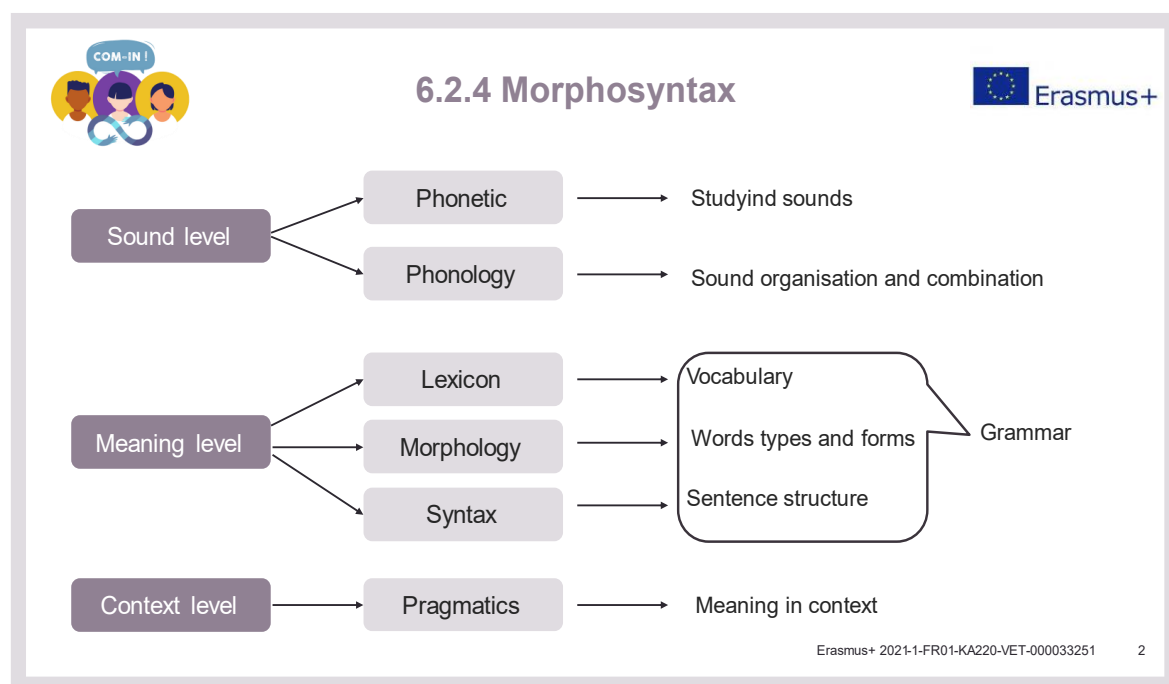
The slides for this presentation (COM-IN_PR3_6_2_4_Morphosyntax_EN.pptx)

A Video projector



3.Slides and Content

Slide n°2



Content:

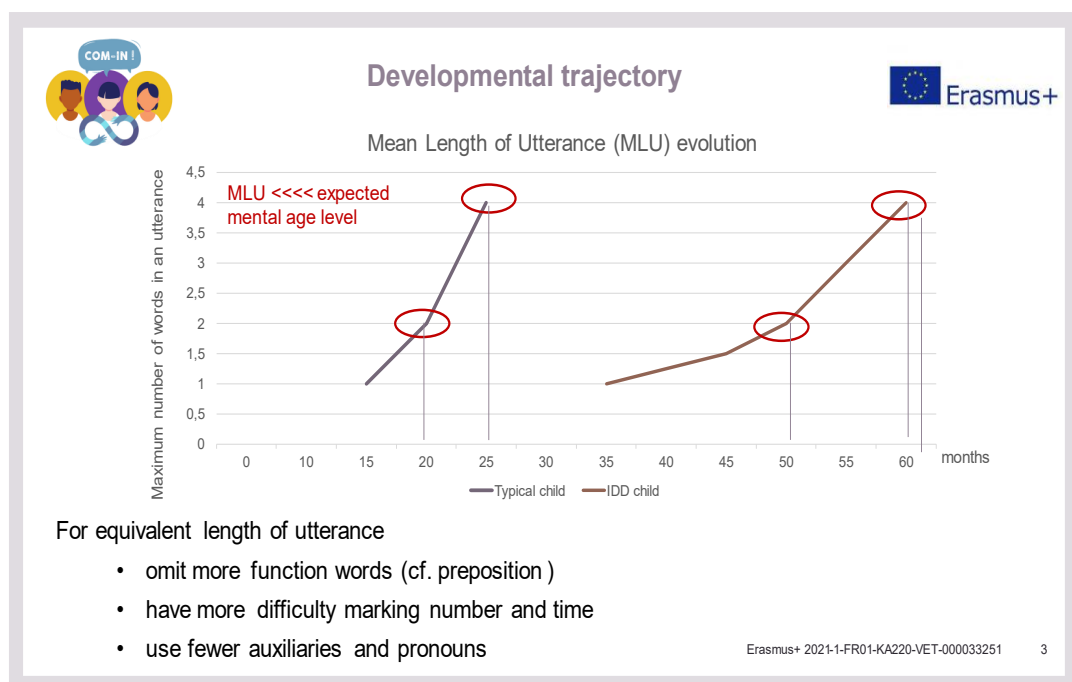
In people with IDD, the morphosyntactic aspects of language remain a major difficulty. The developmental delay already demonstrated in IDD children in terms of mastery of the phonological and lexical-semantic aspects of language is also observed at the morphosyntactic level (Comblain & Thibaut, 2009, 2020). Although most studies have focused on Down



syndrome children, 21 it has been found that in most cases of IDD, combinatorial language is marked by a delay in syntactic expression, but also by production errors, omissions and difficulties in understanding grammatical morphemes (Chapman et al., 2002). Mean Length of Utterance (MLU) is relatively low, even in adulthood; combinatorial language is characterised by a certain formal simplicity of utterances

Notes :

Slide n°3



Content:

From a developmental point of view, the ability to combine several words appears at around 20-24 months in neurotypical children. This marks a



considerable increase in the child's expressive power. Combining 2 or 3 words in the same utterance enables a whole series of meanings to be expressed much more clearly and completely (for example, expressing the existence of a referent, its absence or disappearance; specifying the attribute of a referent, its possession or location; expressing a relationship between an agent and an object, etc.) (J.-A. Rondal et al., 1999).

In IDD children

Important delay in syntactic production compared with typical children

production of a maximum of 4 words in combination at 5 years of age

MLU generally much lower than expected on the basis of their non-verbal mental age

grammatical morphemes are the most problematic

Notes :

Slide n°4





Complexification of morphosyntax in typical children



Age	Syntactic complexity	Description
12-18 months to 2 years- old	One-element sentence	Noun or verb alone Ready-made formulas Context necessary for understanding
2 yrs to 2;6yrs	Two-element sentence	Increasing phrases complexity "baby bottle" = the baby's bottle Subject-verb succession "me want" (the pronoun may not be suitable for the subject-verb combination) Two-part questions, commands
2;6yrs to 3yrs	Three-element sentence	Subject-verb-object/complement structure Beginning of inflectional morphology: production of the verbal, nominal and adjectival inflections (e.g. marks of gender, plural, tense)

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Content:

In the typical child, after the first words have been produced, the child's vocabulary expands, leading him or her, by around 20-24 months, to produce word associations that enable increasingly complex meanings to be expressed.



Combining 2 or 3 words in the same utterance enables a whole series of meanings to be expressed much more clearly and completely (for example, expressing the existence of a referent, its absence or disappearance; specifying the attribute of a referent, its possession or location; expressing a relationship between an agent and an object, etc.) (J.-A. Rondal et al., 1999). In many languages, including French and English, word order and inflectional morphological marking are essential variables for expressing meaning. Most young children's utterances are correctly ordered at around 30 months. The canonical order in French is subject-verb-object, and generally represents an agent-action-patient relationship. Inflectional markings (gender, number, etc.)



on the various lexical items make it possible to encode additional relationships of meaning or to emphasise certain semantic indications already provided in the sentence.

Notes :

Slide n°5



Age	Syntactic complexity	Description
3 yrs to 3;6yrs	Sentences with 4 or more elements	Increasing mastery of inflectional morphology
3;6yrs to 4yrs	Sentences with several clauses	Combination of several propositions to express complex meanings (coordination, subordination, etc.)
4-5yrs	Complex syntax	The essentials of grammar have been acquired Development of the pronominal system, quantifiers and modal verbs Errors may still be made with irregular forms of verbs or plurals, the use of certain determiners, etc.
5 yrs- adolescence	Structuring discourse	Use of connectors, complex structures, control of intonation

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Content:




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What differentiates these first child utterances from adult utterances is, on the one hand, the use in the latter of grammatical words such as articles, pronouns, prepositions, etc., and of inflectional morphological marking and, on the other hand, of syntactic marking of discourse modalities

Notes :

Slide n°6



What's the situation in IDD ?



Word order

- Is not a particular difficulty in IDD
- Process of acquiring these rules similar to that observed in typical children from the stage of first utterances

Utterance length and syntactic complexity

- Steady increase in the length of statements up to the age of 12-14, followed by a significant slowdown in progress or even stagnation
- Stagnation of comprehension skills between adolescence and adulthood

Grammatical morphology

- Deficient words regardless of chronological age
- Comprehension and production below what is expected based on non-verbal mental age

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Content:



The process of acquiring rules for word order in the sentence is like that observed in the neurotypical child. These order rules therefore appear from the stage of first utterances. Subsequently, we observe that the productions of IDD children, although shorter and less complex than those of children of the same developmental age, are correctly ordered.

In adults with IDD, only half of the utterances produced are complete and grammatically correct. Sentence complexity is also reduced. Coordination and subordination are rarely present in productions.

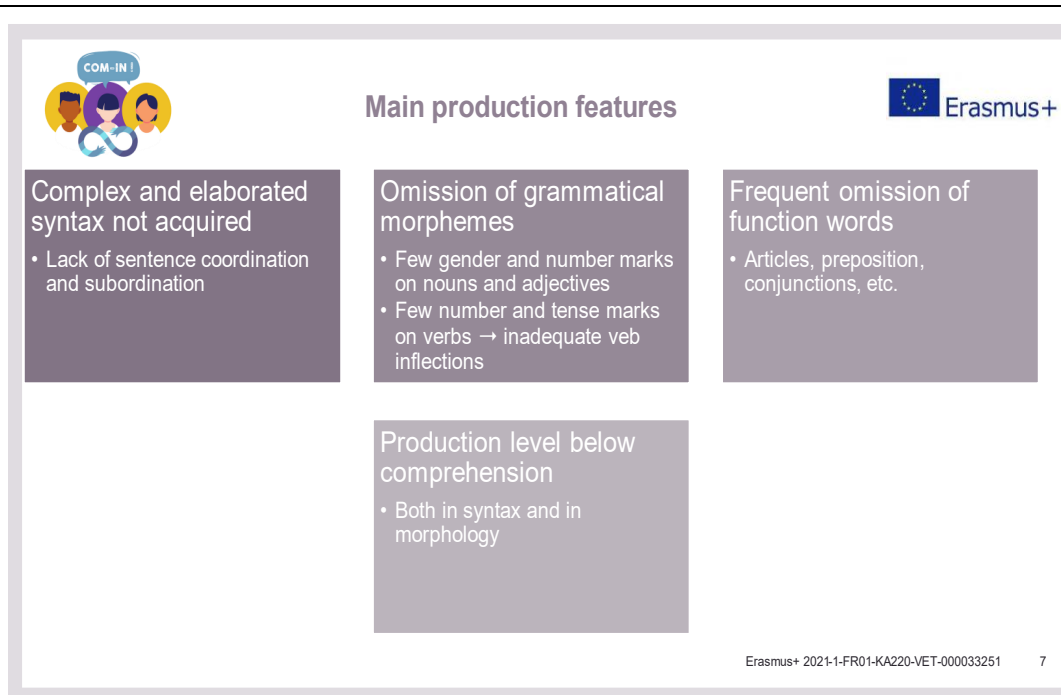
Morphological level is objectively the most deficient, whatever the chronological age of the individual. Comprehension and production of grammatical morphology is below what is expected based on non-verbal mental age.

Why ? → because these forms have little phonetic or perceptual salience. As a result, they do not attract the child's interest at an early stage. It is also interesting to note that the earlier acquisition of syntax than grammatical morphology is also observed in morphologically rich languages (such as German and Italian).

Notes :

Slide n°7





Content:

In adults with IDD, only half of the utterances produced are complete and grammatically correct.

Sentence complexity is also reduced.

Coordination and subordination are rarely present in productions.

Grammatical marking of gender and number occurs only once in two, and definite and indefinite articles are often omitted, as are feminine markings on nouns and adjectives, and tense and person markings on verbs (Comblain & Piérart, 1998; J.-A. Rondal & Lambert, 1983).

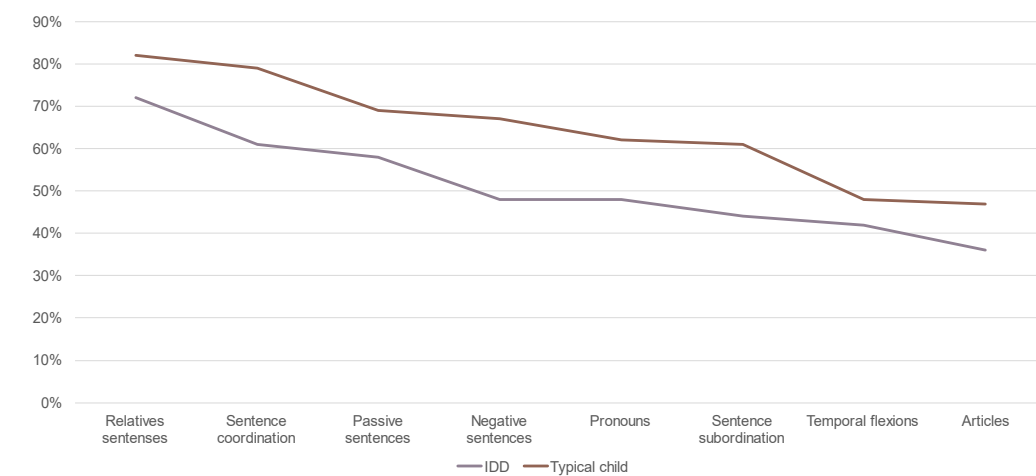
Notes :

Slide n°8





Main comprehension features



Adapted from Comblain (1996)

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Content:

Syntactic comprehension is generally in line with what is expected based on non-verbal mental age, whereas comprehension of grammatical morphology is below what is expected (Price et al., 2007). The difficulty that people with IDD have in mastering the morphological devices of language can be explained by the fact that, unlike the syntactic device, these do not encode independent meaning but rather have a function of modulating the meaning of other terms (the time at which the action takes place, the number, the person, etc.). These forms are phonetic-perceptually less salient and attract the child's attention later.

In 1996, Comblain compared the comprehension performance of complex statements and grammatical flexions in a group of 40 participants with Down's syndrome and typical children matched on the basis of mental age. She found that the comprehension abilities of people with Down's syndrome were lower than expected on the basis of mental age.



Interestingly, the profile of the curves was similar in both groups, suggesting that what is difficult to understand for people with IDD is also difficult to understand for typical children.

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Slide n°9





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Content:

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Slide n°10





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Content:

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